

sufficient evidence “through inspection, observation, inquiries, and confirmations” to be able to render an opinion on the financial statements being audited.⁸² Given that one of the problems with these audits was the failure to perform sufficient procedures as required by GAAS,⁸³ it is interesting that AT&T and Mr. Loebbecke defend the auditors’ approach by characterizing their work as a limited “agreed-upon” procedures engagement that may not require as many procedures, although this actually depends upon the detail of the procedures agreed upon. In this case, however, there was no agreement on, or even any disclosure of, procedures before the field work began.

Moreover, as Arthur Andersen’s Carl Geppert explains, the FCC’s auditors’ procedures were too limited to “provide a reasonable basis for rendering an opinion as to the fair presentation, in all material respects, of the COE plant investment balance.”⁸⁴

Thus, AT&T may be able to show that the FCC auditors followed all of the applicable auditing standards because, possibly, few of those standards would apply to a special purpose or agreed upon procedures engagement. However, in doing so, AT&T has shown, as the RBOCs have been claiming all along, that the audit procedures were too limited and deficient to render an opinion on the hardwire account balances.

If this was truly supposed to be like an agreed-upon procedures engagement, as AT&T alleges, then (1) it could not be used as a basis for an opinion on the hardwire account balances

⁸² *Id* at 4-5.

⁸³ *Id.* See also Ameritech at 12-18 & Attachment A, at 2-10; Bell Atlantic Response at 12-14 & Exhibit 4; US WEST at 14-15.

⁸⁴ Geppert Reply Declaration at 1, 3-4.

or to require them to be adjusted and (2) before the field work even began, the RBOCs and the FCC should have agreed upon the applicable procedures and findings that the FCC auditors would pursue.

VI. THE AUDIT RESULTS SHOULD HAVE NO IMPACT ON RATES.

Even if one ignores for the sake of argument the significant flaws that make the audit results unreliable, these results should have no impact on rates under price cap regulation. The SBC LECs and the other RBOCs explained this in detail in their Responses and Comments.⁸⁵

Based on a Report from Snavelly King Majoros O'Connor & Lee, Inc. ("Snavelly Report"), AT&T and MCI advance two primary arguments for finding that there is an impact on rates due to an increase in revenue requirements:

(1) They claim that delayed retirements caused an overstatement of depreciation expense; and⁸⁶

(2) They allege that some "not found" equipment was never placed in service and that this would cause an overstatement of both the rate base and depreciation expense.⁸⁷

As explained in the Joint Declaration of Jane Knox, SWBT's Director of Accounting, and Robin M. Gleason, Ameritech's Director of Regulatory Finance (the "Knox/Gleason Declaration"), attached as Exhibit "C," delayed or omitted retirements have no impact on depreciation expense, contrary to the Snavelly Report allegation. Other RBOCs also showed the lack of any material impact on depreciation expense and revenue requirements in their Responses and Comments.

⁸⁵ SBC LECs at 50-62 & Exhibit D; Ameritech Response at 12-16; Bell Atlantic Response at 12-17 & Exhibit 5 (White Affidavit); BellSouth at 44-52; US WEST at 25-28 (citing USTA Comments, filed Sept. 13, 1999).

⁸⁶ AT&T at 30-31; MCI at 36-38 & Attachment 2, at 6-11.

⁸⁷ AT&T at 30; MCI at 35.

In its Response, Ameritech used a simplified example to show that there would not be any change in depreciation expense if the delayed retirements had been made on time.⁸⁸ The Ameritech example rests on the assumption that, while gross plant would be lower, the depreciation rate would be higher. The assumption that the depreciation rates would be higher, in turn, rests on the assumption that the remaining life of the plant category would have remained the same, even if the retirements had been made on time.⁸⁹ The Snavely Report questions this last assumption and contends that the remaining life would have been longer if the retirements had been made on time.⁹⁰ As explained in Exhibit "C," the flaw in the Snavely Report's analysis is that it assumes that the projection life⁹¹ used in the calculation of the remaining life would not be affected if the delayed retirements had been made on time.⁹² On the contrary, if the retirements had been made on time, the impact should be to shorten the projection life, in recognition of the shorter life span of retired units.⁹³ Consequently, the failure to retire property on time does not result in an understated remaining life, as the Snavely Report alleges. Thus, the depreciation rate should increase, but depreciation expense should remain unchanged when that higher rate is applied to a reduced gross plant.

The Knox/Gleason Declaration provides an illustration using the same simplified example as the Snavely King Report. This simple illustration shows that the depreciation expense would remain the same had the retirements been made on time. However, because the Ameritech example was simplified for presentation purposes, the Knox/Gleason Declaration

⁸⁸ Ameritech Response at 13.

⁸⁹ *Id.*

⁹⁰ Snavely Report at 7-9.

⁹¹ Projection life means the entire projected or estimated life span of the plant from installation to retirement.

⁹² Knox/Gleason Decl., attached as Exhibit "C" at 3-4.

⁹³ *Id.* at 3.

recognizes that if more specific data is used, such as the survivor curve shape prescribed for central office equipment, rather than the square shape arbitrarily selected by the Snavelly Report, delayed retirements actually may have caused depreciation expense to be understated in previous years.⁹⁴ As Ameritech's example and the illustrations in Exhibit "C" show, customers could not be harmed in any event, because the delayed retirements did not cause any increase in depreciation expense.

AT&T and MCI contend that some of the missing equipment was never placed in service and that this equipment had an even larger impact on the revenue requirements than a delayed retirement.⁹⁵ However, this contention goes beyond the scope of the audits. The auditors did not contend that assets never existed, nor did they perform any procedures to be able to reach such a conclusion. The auditors identified what they considered "not found" as of the date of the field visits but they did not pursue these items to the point of being able to conclude that the items never existed. They did not conduct any follow-up investigation to determine the reason for the

⁹⁴ Dr. White and Dr. Taylor likewise recognize that precise quantification would be more complex than the simplified examples, but they still conclude that there should be little, if any impact on the remaining lives. USTA Comments, filed Sept.13, 1999, Exhibit at 9; Bell Atlantic Response, Exhibit 5.

⁹⁵ AT&T at 30; MCI at 35. AT&T and MCI claim that it is likely that missing equipment from recent vintages was never in service, as opposed to being a delayed retirement. AT&T at 30; MCI at 38. This is pure speculation that goes beyond the scope of the audit. The auditors did not even test the RBOCs' internal controls to assess the likelihood that any of the missing equipment was never placed in service. In any event, even assets of recent vintage are subject to the forces of retirement, such as physical and environmental factors (accidents/casualties) or functional factors (defective/inadequate). In fact, mortality curves for assets as young as one-half year do not have a survivor ratio of 100%. Thus, any claim that retirement of recent vintages of equipment is "highly unusual" is speculative and misguided.

As one text explains,

A group of property installed during the same accounting period is analogous to a group of humans born during the same calendar year. A certain fraction of those born will die as infants, and the term *infant mortality* has been used to describe the retirement of industrial property soon after its installation."

Wolf & Fitch, DEPRECIATION SYSTEMS 21 (1994).

“not found” condition, nor did they seek any proof as to whether the assets had ever existed. Further, the auditors did not even review the RBOCs’ internal controls to determine whether they were sufficient to prevent equipment from being booked even though it was not placed in service.⁹⁶ In fact, as Bell Atlantic explains, there are ample internal controls and safeguards to assure that non-existent equipment is not booked.⁹⁷ Certainly, nowhere in the audit reports is there any suggestion of any fraudulently reported assets.

If this audit had been performed in a different manner, then, perhaps, whether the equipment was ever placed in service could be an issue. However, on the record compiled by the auditors in these audits, the most that can be said is that these are delayed or omitted retirements.

Moreover, even if the audit had focused on whether “not found” assets ever existed, given the difficulty and burden of finding documentation, one cannot safely assume that the RBOCs failure to provide definitive proof satisfactory to the auditors would mean that the equipment never existed. The question is what expense and burden is reasonable to impose for finding positive proof on an immaterial amount of equipment. Further, the FCC recognized these burdens were excessive when it eliminated specific document retention requirements in 1986 (as discussed in Section IX below), making it less likely that documentation can be found for older vintages of equipment.

In summary, AT&T and MCI have not shown that the audit results could have any impact on revenue requirements. As the SBC LECs and other RBOCs have discussed in previous filings, this means that there could also be no impact under any of the rate-of-return mechanisms of price cap regulation.⁹⁸ However, even assuming *arguendo* that there were some impact on current revenue requirements, it would not be possible to extrapolate the results as of 1997 to any

⁹⁶ Geppert Reply Declaration at 12-13.

⁹⁷ Bell Atlantic’s Response at 13-14 & Exhibit 4.

⁹⁸ See, e.g., SBC LECs at 53-57; Ameritech Response at 14-17; Bell Atlantic at 8-9 (citing USTA Comments, filed Sept. 13, 1999); BellSouth at 46-52; US WEST at 25-28.

prior periods. Even a reliable statistical estimate of the “not found” equipment in 1997 would not provide a basis for any conclusion concerning the amount of “not found” equipment in 1996, 1990 or any other year.⁹⁹

AT&T speculates that the records were much worse in the early 1990s than today and MCI claims that the audit reports demonstrate that the problems are longstanding.¹⁰⁰ However, the audit reports do not prove anything of the kind and they certainly do not provide any estimates for any prior periods. As Arthur Andersen’s Carl Geppert explains, “procedures performed to test the existence of assets are relevant only to the point of time (given date) at which such procedures were performed.”¹⁰¹ The discussion of the “Duration of the Problem” in the audit reports is likewise purely hypothetical and speculative.¹⁰² The audit staff did not perform any procedures to permit it to draw any conclusions concerning the state of the records in prior periods.¹⁰³

Any observations concerning prior periods are purely judgmental and unsupported. AT&T cannot safely speculate that the records were in worse shape during years in the early 1990s that are closer to the time when this recordkeeping was conducted under AT&T’s ultimate control and AT&T’s detailed policies and accounting letters. Nor, as will be obvious in the discussion in Section VIII below, can it properly allege that the undetailed account balances provide any support for its speculation.

Under the circumstances, there is no rational basis to extrapolate any of the audit

⁹⁹ Bell Atlantic Response at 15-16.

¹⁰⁰ AT&T at 32; MCI at 39.

¹⁰¹ Geppert Reply Declaration at 11. While GAAS does contain procedures for extending an audit’s conclusions from an interim date to the balance sheet date, those types of procedures were not used by the auditors in these audits, even if it were possible to do so. *Id.*

¹⁰² See SBC Response at 4-5 n.8 & Attachment B, at 3 (Letter dated Jan. 8, 1999 from Fritz Scheuren, Ernst & Young, LLP, to B. Jeannie Fry, Director, Federal Regulatory, SBC.)

¹⁰³ Geppert Reply Declaration at 11-12.

conclusions as of mid-1997 to any prior periods, as suggested by MCI and AT&T.

VII. THE FCC SHOULD NOT TAKE ANY ACTION, BASED ON THE AUDIT RESULTS, WHICH IS INCONSISTENT WITH PRICE CAP REGULATION OR OTHER RULES.

AT&T argues that “the RBOCs must disgorge their illegitimate gains.”¹⁰⁴ How this is done is apparently not important to AT&T. In fact, it apparently maintains that the FCC need not follow its own rules in fashioning a remedy.¹⁰⁵ As the SBC LECs and other RBOCs have explained in previous filings, the audit results are too unreliable to support any corrective action, but even if they were reliable, “not found” items would need to be handled as normal retirements.¹⁰⁶ Further, it is not possible, under the current rules, to retire an extrapolated figure, even if it were highly accurate.¹⁰⁷ If such a lump sum retirement were made, there would no longer be any correlation between the CPR and the actual property in service.¹⁰⁸ The FCC must follow its own accounting rules in its disposition of these audits. If it desires to do so, it can change or clarify the rules for purposes of future audits, but carriers must have advance warning of the accounting practices and standards the FCC will apply. For the remainder of the problems presented by using these audits to make accounting adjustments or to support other corrective action, see the SBC LECs’ Comments.¹⁰⁹

MCI similarly suggests that the FCC should manipulate price cap regulation to lower

¹⁰⁴ AT&T at 35.

¹⁰⁵ *Id.*

¹⁰⁶ SBC LECs at 57-62.

¹⁰⁷ *Id.* at 58; Ameritech Response at 17, Bell Atlantic Response at 23-24; BellSouth Response at 32 n. 77.

¹⁰⁸ SBC LECs at 35.

¹⁰⁹ *Id.* at 27-38.

rates “to remove the effects of plant overstatements.”¹¹⁰ As the SBC LECs and other RBOCs explained, this would be inconsistent with price cap regulation.¹¹¹ But, apparently, in MCI’s view as well, the ends justifies the means. However, as Dr. Taylor explains, the audit results “have nothing to say about conditions in 1990 and cannot be used retroactively to formulate new estimates of costs in 1990”¹¹² MCI cites precedents where the FCC proposed PCI reductions to remedy price cap carrier accounting rule violations that inflated the original price cap rates.¹¹³ However, these proceedings are distinguishable for a number of reasons. For example, the FCC merely proposed a price cap adjustment. The fact that the carrier voluntarily agreed to make an adjustment does not necessarily mean that a compulsory adjustment would be proper. Also, in the two cited cases, the FCC was auditing the years immediately preceding the implementation of price cap regulation (1988-90) and was able to calculate a direct impact on the initial price cap based on the audit results. Here, in contrast, the audit reports only provide estimates of alleged overstatements in the account balances in 1997, not those in 1990.¹¹⁴

VIII. THE AUDITS WERE NOT DESIGNED TO PRODUCE STATE RESULTS.

AT&T suggests that the FCC “should work with the state commissions to ensure that the

¹¹⁰ MCI at 40-41.

¹¹¹ *See, e.g.*, SBC LECs at 54-55.

¹¹² USTA Comments, filed Sept. 13, 1999, Exhibit at 11.

¹¹³ MCI at 41.

¹¹⁴ In effect, MCI is suggesting that the FCC create a new rule regarding remedies for accounting rule violations to be applied to conduct that occurred in 1990 or earlier, which would be improperly retroactive. *RKO Gen. v. FCC*, 670 F. 2d 215, 224 (D.C. Cir. 1981).

appropriate rate adjustments and refunds are made.”¹¹⁵ As Florida observes, the audit sample was not designed to produce accurate estimates at the state level.¹¹⁶ Likewise, EY agrees in its statistical analysis that the “design does not support state-by-state estimation as presently structured.”¹¹⁷ Thus, aside from the many other problems with the audit results, an additional problem exists in attempting to use any results at the state level.

IX. UNDETAILED INVESTMENT WAS NOT MISSING WHEN AT&T TURNED IT OVER TO THE RBOCs AT DIVESTITURE AND IT IS NOT MISSING NOW.

Citing the property record requirements in Part 32, and its predecessor, Part 31, AT&T and MCI contend that all of the “undetailed investment” must be considered “missing.”¹¹⁸ AT&T says that the RBOCs should be required to show cause why the “undetailed investment” should not be removed from the property records “immediately.”¹¹⁹ Like the auditors, AT&T and MCI are picking and choosing what they consider relevant to the inquiry regarding the undetailed investment. This is especially troubling in the case of AT&T, given its close involvement in developing and implementing the Bell System property records for the BOCs’ and its own network equipment.

“Undetailed investment” exists because AT&T created a new mechanized property record system (know as “PICS/DCPR”) in the 1960s to better manage and keep track of its

¹¹⁵ AT&T at 34.

¹¹⁶ Florida PSC Comments, filed June 7, 1999, at 3.

¹¹⁷ SBC LECs, Exhibit A, at 4.

¹¹⁸ AT&T at 38-39, MCI at 31. This discussion focuses on the “undetailed investment” that pre-dates implementation of the mechanized property record (PICS/DCPR) because, with the exception of the assets Ameritech had recently acquired from Sprint, virtually all of SWBT and Pacific Bell “undetailed investment” is from vintages prior to their implementation of PICS/DCPR. When MCI says that “up to 97 percent of the RBOCs’ undetailed investment” is post-implementation, MCI at 27, it is not referring to any of the SBC LECs.

¹¹⁹ AT&T at 36.

network equipment. This new mechanized system also provided a more practical method of performing inventories and would facilitate an audit of network equipment. Without the mechanized system, an auditor would be required to review stacks upon stacks of job folders and invoices and central office drawings to find the “manual” property records for a piece of equipment. Without a mechanized system, physical examination of a sample of 36 items in a central office could take weeks rather than a few days. It is no wonder that AT&T proposed the adoption of such a system in the 1960s, given the advent of computers and closer scrutiny of AT&T’s interstate tariffs. But, in balancing the benefits of the new mechanized system against the burden of converting all of the old “manual” records to this system, the FCC agreed with AT&T’s proposal to implement this new mechanized system on a purely “going-forward” basis, as it was adopted in each regional company. In its filing of the various Comptroller’s letters, AT&T described its procedures for maintaining the undetailed plant balances and, by its December 1968 ruling, the FCC accepted these procedures. Thus, these procedures established the acceptable method of handling undetailed investment.¹²⁰

AT&T and MCI contend that the FCC did not exempt the pre-existing equipment from the property record requirements, but the question is what requirements the FCC imposed as a practical matter regarding this pre-existing equipment. The answer is “none.” There is no indication that the FCC was interested in auditing or physically verifying all of the pre-existing records to assure their accuracy. Instead, as the December 1968 ruling indicates, the FCC was interested in establishing a reliable system to keep track of all of the new equipment. The FCC recognized that requiring compilation of detailed records for all of the pre-existing equipment was not worth the expense because that equipment would eventually be retired and replaced. Indeed, if the FCC had required AT&T to detail all of its central office hardwire equipment in PICS/DCPR on a flash-cut basis in the late 1960s, the enormous cost of this project would have

¹²⁰ *Id.*

provided AT&T a basis to increase its rates.

Certainly, AT&T cannot honestly claim that all “undetailed investment” must be considered “missing” for AT&T was the ultimate owner of all of this undetailed equipment prior to divestiture and it transferred control of a significant portion of it to the RBOCs’ in 1984. If it truly were missing, then the RBOCs would have every right to hold AT&T accountable. For example, shortly before divestiture in 1983, almost all of SWBT’s \$6 billion of hardwire investment was “undetailed” because SWBT had just implemented the detailed property record system, pursuant to the specific instructions from AT&T’s comptroller and legal departments. Certainly, the SBC LECs do not believe that AT&T would claim that this \$6 billion of investment was “missing” when it was transferred to the ultimate control of the newly formed Southwestern Bell Corporation at divestiture.¹²¹ That a network serving millions of customers was running was proof that the undetailed equipment existed. Now that the vast majority of this pre-PICS/DCPR equipment has been retired, AT&T and the FCC auditors demand strict proof of the remainder’s existence and compliance with rules that the FCC has never before sought to enforce against this class of equipment.

It would be unreasonable to be so concerned about this class of equipment in 1999, in our current regulatory environment, when the approach in 1968 was simply to permit the pre-existing records to remain undetailed in the new property record. In fact, the AT&T procedures filed with the FCC in 1968, and accepted by the FCC’s ruling, used a “residual” method of calculating the beginning balance of the “undetailed” entries.¹²² If the FCC had been concerned that the “undetailed” amounts in PICS/DCPR would be significantly overstated, it would have required an inventory or audit of these undetailed entries, instead of permitting all of the residual to be

¹²¹ The SBC LECs would be interested in knowing what property records AT&T maintained and whether those records complied with its current interpretation of the FCC’s requirements with respect to its undetailed records when those were still applicable to AT&T’s network.

¹²² See SBC LECs Response at 36 & n.86.

loaded in PICS/DCPR as a lump sum.

AT&T and MCI claim that these “undetailed” records are not exempt from the property record requirements, but , the fact is that the FCC’s approach to the “undetailed” assets was to permit them to remain undetailed for the balance of their lives. In practice, prior to these audits, the FCC has not required carriers to provide actual cost support for their undetailed equipment. Consistent with this approach, at the time of retirement, the rules provide a procedure for “estimating” the original cost for retirement purposes.¹²³

As US WEST points out, the FCC recognized the burden of its document retention requirements when it eliminated almost all of the record retention requirements in 1986.¹²⁴ The FCC reduced administrative burdens and costs by giving carriers “greater flexibility in determining the proper retention periods for their records.”¹²⁵ Thus, any claim that the RBOCs must furnish a specific document in support of the older vintages of equipment such as the undetailed assets is contrary to the FCC’s ruling that eliminated specific document retention periods for network equipment records.¹²⁶

As the December 1968 ruling recognized, the cost and difficulty of identifying all of the “undetailed investment” is very high. In spite of this difficulty, the RBOCs have provided proof

¹²³ See 47 C.F.R. § 32.2000(f)(4): “In cases where the actual original cost of property cannot be ascertained, *such as* pricing an inventory for the initial entry of a continuing property record or the pricing of an acquisition for which a continuing property record has not been maintained, the original cost may be estimated.” (emphasis added) See also BellSouth Comments at 38-39 (undetailed investment is assigned to equipment, i.e., estimated, at the time of retirement).

¹²⁴ US WEST at 17-18 & n.42 (citing *Revision of Part 42, Preservation of Records of Communications Common Carriers*, 60 R.R. 2d (P&F) 1529 (1986) (“*Part 42 Record Retention Ruling*”)). See also SBC LECs Response at 49.

¹²⁵ *Part 42 Record Retention Ruling*, 60 R.R.2d (P&F) at 1535, ¶32.

¹²⁶ In fact, a number of items on the list of records that appeared in Part 42 prior to August 1986 prescribed a retention period of “6 years after plant is retired.” For example, the retention period for “vouchers,” “bills,” “authorizations for payment,” “projects” and “undertakings” relating to plant accounts had to be retained for 6 years after retirement of the plant. See 47 C.F.R. §42.9 (1984). After these requirements were eliminated, each carrier set its own retention periods consistent with its own business needs and the requirements of other agencies, such as the IRS.

of the existence of undetailed investment that should be sufficient under the circumstances. For example, SWBT and Pacific Bell have compiled detailed records for a significant portion of the undetailed investment. For example, as a result of the SAVR inventory program, SWBT has been able to detail about \$467 million of its undetailed equipment so far and an additional portion has been eliminated through normal retirements. In fact, the SBC LECs have asked repeatedly that the FCC auditors review the SAVR process in order to show the existence of undetailed investment and the effectiveness of this process, but the auditors have refused to extend their analysis into this area.¹²⁷ Similarly, Ameritech demonstrated the existence of the undetailed investment by submitting a floor plan and detailed information on one specific central office in Illinois showing where the undetailed investment was located.¹²⁸

For all of these reasons, and especially in view of the 1968 ruling and the AT&T procedures it accepted, the undetailed investment cannot be classified as missing. Further, any action the FCC takes regarding the undetailed investment should (i) use the same sort of cost/benefit approach reflected in the 1968 ruling's decision not to require detailing of the embedded hardwire equipment and (ii) recognize the efforts of some RBOCs in reducing the undetailed investment, such as the SBC LECs' SAVR inventory program already implemented at SWBT and Pacific Bell.

X. CONCLUSION.

Like the other RBOCs, the SBC LECs find serious problems with the manner in which these audits were conducted. Likewise, independent statisticians and accountants at three major accounting firms have found serious deficiencies in the statistical design and methodology and in the failure to follow basic principles of applicable accounting standards, including those of both GAAS and GAGAS.

¹²⁷ See SBC LECs at 30, 40-42, 47 & Exhibit C; SBC Response at 9 & n. 13, 15, 18-21, 45 & n. 105, 47 & n. 130, 49-50.

¹²⁸ See Ameritech Response at 10 & Appendix D. See also Letter dated Aug. 27, 1998 from Robin M. Gleason, Ameritech, to Kenneth M. Ackerman, FCC.

While the SBC LECs continue to object to the FCC publicly conducting an audit as a “game of Gotcha”¹²⁹ rather than as an opportunity to clarify rules and enhance company procedures, AT&T and MCI have not been able to brush aside some of the most serious problems with these audits. The audit results concerning account balances are so imprecise from a statistical standpoint that they cannot rationally serve as a basis for any action. Rather than address this directly, AT&T and MCI focus exclusively on the point estimates while carefully sidestepping the fact that they are built on a very weak foundation of shifting sand. Other problems that AT&T and MCI unsuccessfully attempt to belittle also undermine the audit results to the point that they are of no practical value in assessing the accuracy of the RBOCs’ account balances. For example, failure to perform a two-way audit makes it impossible to express a complete opinion. Omission of audit procedures and lack of dialogue and interaction with RBOC management concerning the rescoring data causes any results of the limited, restrictive rescoring procedures to be highly questionable. In fact, under GAAS, the auditors cannot express a credible opinion on the accuracy of the account balances because the audit procedures were too limited. And, in any event, a flawed audit of 1997 records cannot provide any useful information concerning the status of account balances in prior years. In addition, applying “secret” standards to the RBOCs’ rescoring data, which standards are only released many months after the fact, is fundamentally unfair.

Even if the FCC auditors had properly designed the sample and conducted the audit to avoid all of these problems and in a manner that could produce reasonably accurate and unbiased results, that whole effort would be wasted because audit results of this nature should no longer have any impact on rates, notwithstanding AT&T’s and MCI’s suggestions that the FCC should ignore its rules or manipulate them to produce their desired outcome. This the FCC cannot do consistent with the rules and applicable auditing standards on the basis of these audits.

¹²⁹ NOI, Separate Statement of Commissioner Furchtgott-Roth, Dissenting in Part at 3.

Instead, as the SBC LECs and other RBOCs as well as GTE have suggested,¹³⁰ the FCC should use these audits as an opportunity to streamline property record requirements. As for the audits themselves, the FCC should simply reject the results as unsound and unreliable and bring the audits to a conclusion without further action.

Respectfully submitted,

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October 25, 1999

¹³⁰ See, e.g., SBC LECs at 45-50, 66-73; BellSouth at 55-57; GTE at 4-7; US WEST at 29-31.

Exhibit A

DECLARATION OF FRITZ SCHEUREN

AND EDWARD J. MULROW

DECLARATION OF FRITZ SCHEUREN AND EDWARD J. MULROW

1 Introduction.

1.1 We are statistical consultants engaged by Bell Atlantic Telephone Companies, BellSouth Telecommunications, and SBC Telecommunications, Inc. (subsequently referred to as “the RBOCs”) to evaluate the Continuing Property Records (CPR) audits conducted by FCC staff in 1997.^{1,2,3,4,5} The scope of our work was limited, however, to the sampling design employed in the audits and to the statistical aspects of its execution. In carrying out this work we independently examined each client RBOC’s data pertaining to the CPR audits. In January of 1999, we publicly filed our opinions on each client RBOC’s audit conducted by the FCC. These opinions may be found in the appendices or exhibits of each RBOC’s response to the audit of continuing property records.^{6-7,8}

¹ Federal Communications Commission Common Carrier Bureau Accounting Safeguards Division, *Audit of the Continuing Property Records of the NYNEX Telephone Operating Companies Also Known As Bell Atlantic North As of March 31, 1997*, December 22, 1998

² Federal Communications Commission Common Carrier Bureau Accounting Safeguards Division, *Audit of the Continuing Property Records of Bell Atlantic Telephone Operating Companies Also Known As Bell Atlantic (South) As of March 31, 1997*, December 22, 1998

³ Federal Communications Commission Common Carrier Bureau Accounting Safeguards Division, *Audit of the Continuing Property Records of BellSouth Telecommunications, Inc. As of July 31, 1997*, December 22, 1998

⁴ Federal Communications Commission Common Carrier Bureau Accounting Safeguards Division, *Audit of the Continuing Property Records of Southwestern Bell Telephone Company As of June 30, 1997*, December 22, 1998

⁵ Federal Communications Commission Common Carrier Bureau Accounting Safeguards Division, *Audit of the Continuing Property Records of the Pacific Bell and Nevada Bell Telephone Companies As of June 30, 1997*, December 22, 1998

⁶ *Response to Audit Staff Draft Report of Findings Related to Audit of Continuing Property Records of Bell Atlantic*, January 11, 1999, Appendix A

⁷ *BellSouth’s Response to Audit of Continuing Property Records of BellSouth Telecommunications As of July 31, 1997*, January 11, 1999, Exhibit 1

⁸ *Reply to December 22 1998 Draft Report of the Federal Communications Commission Accounting Safeguards Division Audit of Nevada Bell, Pacific Bell and Southwestern Bell Telephone Company*, January 11, 1999, Attachment B

1.2 Dr. Scheuren has been a professional mathematical statistician for more than 25 years. He is an internationally known sampling expert, and has published widely on survey design and other statistical problems – authoring, co-authoring or editing nearly 150 books, monographs, and papers.

1.3 When the work of evaluating the CPR audits began, Dr. Scheuren was a Principal with Ernst & Young, LLP. He has subsequently taken a position as a Senior Fellow at The Urban Institute. He is currently overseeing the National Survey of America's Families, a large complex survey with a dual frame design. However, he continues to consult with the statistical staff at Ernst & Young LLP.

1.4 Dr. Edward Mulrow is a senior manager with Ernst & Young, LLP. He has overseen all Ernst & Young's work involved in evaluating the CPR audits. He has a Ph.D. in statistics from Colorado State University, and has over 13 years of experience in statistical consulting. His experience in sampling statistics before coming to Ernst and Young, LLP was obtained while working at the Internal Revenue Service (IRS) and for the National Opinion Research Center at the University of Chicago (NORC). There he designed and built a prototype sample system that is used to maintain all NORC's national survey frames.

2 Purpose and Summary of the Affidavit.

2.1 The purpose of this filing is to respond to the statistical issues and concerns raised in affidavits submitted by the AT&T Corporation⁹ and its experts Dr. Robert Bell¹⁰ and Mr. James Loebbecke.¹¹ It should be said at the outset that none of what we read changes our previously stated conclusions. We continue to believe that –

⁹ *Comments of the AT&T Corp. (Public Version) Before the Federal Communications Commission*, Washington, D.C. 20554, CC Docket no 99-117 ASD file No. 99-22, September 23, 1999

¹⁰ *Affidavit of Robert M. Bell, Ph.D. (Public Version) Before the Federal Communications Commission*, Washington, D.C. 20554, CC Docket No. 99-117, ASD File No. 99-22, September 23, 1999

¹¹ *Affidavit of James K. Loebbecke, CPA (Public Version) Before the Federal Communications Commission*, Washington, D.C. 20554, CC Docket No. 99-117, ASD File No. 99-22, September 23, 1999

The estimates in the FCC's draft audit reports contain biases and are inaccurate.

Given these errors and biases, the amounts reported by the FCC audit staff as overstated investment are unsound and cannot be fairly relied upon.

2.2 We confess some surprise in what, for us, is a major omission in the AT&T filing – the issue of the uncertainty of the estimates of missing plant in the CPR audits.

2.3 All the submissions lack a candid discussion of the poor precision in the estimated values of the property record audits. Such precision considerations are essential when determining whether the estimates are credible enough to use as a basis to justify action against the RBOCs. It remains our opinion that they are not. (See Section 3.)

2.4 The margin of error of an estimate, which is related to its confidence bounds, reflects the precision of an estimate.¹² The degree of precision can be controlled through the design of the sample. A high degree of precision may call for a costly sampling plan, so it is up to the those who are in control of the audit process to determine the trade-offs between sampling cost and the benefits of high precision. For this reason, the staff should assess the amount of alleged overstated property using a lower confidence bound. One of AT&T's own experts agrees (in other writings) that the confidence bound rather than a point estimate is the appropriate measure. (See Sections 4 & 5)

¹² "Precision" is another term for "margin of error." This is closely linked to the confidence level. Suppose for example, an estimate is reported to be 150 plus or minus a margin of error of 10 at the 95 percent confidence level. Then if you were to add and subtract 10 from 150 you would obtain the interval 140 to 160. This is the confidence interval. To say that there is 95 percent confidence means that if you could repeat the sampling process under identical circumstances using the identical sample design but different random selections, then 95 out of 100 times the true value that is being estimated would fall inside the confidence interval. Five times out of 100, it would not.

2.5 The confidence level is also a factor that effects the margin of error, and hence the precision of the estimate. Choosing a low confidence level will decrease the margin of error, while a high confidence level increases the margin of error.

2.6 In the CPR audits, however, we remain convinced that because of the numerous nonsampling errors and biases introduced during the property record audits, a more conservative choice of a higher confidence level is justified.

2.7 Assessment of nonsampling errors is always difficult, but should not be ignored – especially when they appear excessive as in this case. Such errors certainly add uncertainty into the decision process. Increasing the confidence level for the margin of error is one way to recognize this. We originally suggested that an increase from 95 percent to 99 percent would reasonable. This remains our view. (See Section 6.)

2.8 Dr. Bell and Mr. Loebbecke both address technical aspects important in analyzing the CPR audit data. While we agree in principle with them on many issues, several incorrect statements have been made. The net effect of which is quite misleading. (See Sections 7 - 11)

2.9 Overall, to reiterate, we feel that there are serious weaknesses in the CPR audit estimates. We continue to maintain that the result of these weaknesses is that the precision of the audit estimates is too poor to be of any credible use for any extrapolation to the book value of the RBOCs inventory.

3 Attention to Precision is Needed for Actionable Estimates.

3.1 An estimate is just that, an *estimate*, not a *true* value. Before utilizing an estimate, one needs to know how precise it is. The confidence level and the margin of error are a means of describing the precision. Confidence bounds, in turn, can be used to judge the validity of decisions based on the sample.

3.2 Dr. Bell would have his readers believe that so long as an estimate is calculated using the right formula out of the right textbook, the estimate is “valid.” This is clearly not true. To be a “valid” basis for action, an estimate not only needs to be calculated using an appropriate formula, but the margin of error must be reasonable.

3.3 To illustrate this, suppose a population consists of the numbers 0,1,2,3 ..., up to 1000. It can be shown that the true average of this population is 500. Now consider estimating the true average from a sample with only two numbers randomly selected from this population. The formula for estimating the mean from the sample is, of course, the sum of the selected numbers divided by two. In this example, the lowest estimate you could obtain is 0.5 (from selecting “0” and “1”) and the highest estimate is 999.5 (from selecting “999” and “1000”). The symmetric margin of error at the 95 percent confidence level will typically be about 400.¹³ This large margin of error indicates that estimates from sample to sample will vary significantly. This kind of instability in the possible estimates is completely ignored by Dr. Bell when he argues to use the point estimates without addressing the estimate’s precision.

3.4 Similar to the example in 3.3, the property record audits failed to sufficiently control the precision of the estimates for overstated RBOC inventory. Therefore, they failed to provide meaningful estimates from which one can draw a conclusion about the value of the missing inventory.

3.5 The estimates from the property records are too imprecise to be actionable. Decisions based on the audit results should only be made after carefully considering the amount of uncertainty. The lack of precision of the estimates needs to be considered when evaluating the results of the audit.

¹³ This calculation is based on the fact that the population of number has a standard deviation of about 289. The standard error of a sample of size two is therefore approximately 204. Multiplying this by 1.96, the

4 A Confidence Bound Should be Used to Determine an Audit's Findings.

4.1 A confidence bound is the result of adding or subtracting the margin of error from the estimate.¹⁴ Such bounds are a means of considering the accuracy of estimates in terms of their confidence and precision. Confidence bounds that are far from their estimates indicate very poor precision (as we saw in 3.3 above). Confidence bounds that are close to their estimates indicate more precise results. Because of the large margins of error of the estimates in the property record audits, the confidence intervals are extremely wide with bounds that are far from the estimated values. These bounds quantify the unreliability of the results obtained.

4.2 Dr. Bell and AT&T argue that the point estimate¹⁵ should be used when considering punitive action against the RBOCs. Mr. Loebbecke is silent on this issue¹⁶ in his affidavit. However, the textbook he co-authored states the contrary:

“After completing tests of the sample, the auditor is in a position to generalize about the population. It would be wrong to conclude that the population error rate is exactly the same as the sample error rate; [emphasis added] the odds of this being the case are just too low. Instead, the auditor must compute the upper precision

confidence factor corresponding to a two-sided, 95 percent confidence level, gives the margin of error for the example.

¹⁴ While serviceable in the current context, it should be noted that this statement is not complete. It only deals with a special case. The method described, however, is what is most often written in textbooks. There are other methods for computing these bounds, but we do not believe it is necessary to describe them here. To determine a confidence bound, the variability of an estimate is calculated using an appropriate statistical formula that depends on the sample design used. The square root of this number is multiplied by a constant that depends on the level of confidence, the sample size, and whether one wants one-sided or two-sided bounds. This product is the “margin of error.” The margin of error is subtracted from the estimate to obtain the lower confidence bound and added to the estimate for the upper confidence bound. The interval between the lower and upper bounds is called the confidence interval. The more imprecise an estimate is, the larger its margin of error is, and the wider the confidence interval is.

¹⁵ The “point estimate” is single number of the estimated value. It does not incorporate the estimate’s confidence and precision.

¹⁶ Point of fact, Loebbecke is silent on most of the major statistical issues in his affidavit, despite the fact that he is a statistical expert and co-authored a book on audit sampling.

limit for the population error rate at the confidence level desired,
based on the actual sample results.”¹⁷

4.3 In 4.2 above, Mr. Loebbecke is discussing evaluation of the estimated proportion of errors; in this case the upper bound is appropriate (and the upper bounds were indeed the ones reported by Ernst & Young).

4.4 To evaluate the overstatement of the inventory value, refer to Roberts’ text on **Statistical Auditing**. In it, he explains:

“Much of the auditor’s work is not constructive, but critical. He must decide whether the evidence supports such propositions as compliance with the pertinent accounting control is satisfactory, this inventory amount is not materially misstated,.... In these circumstances the auditor must decide whether or not the statistical evidence supports the proposition.”¹⁸

4.5 Both the Roberts and Loebbecke texts state that the amount of misstatement that is regarded as “material” should be specified ahead of time – something not done in these audits. Both texts go on to describe constructing decision limits and critical intervals for deciding whether there is enough statistical evidence that the material amount¹⁹ is misstated.

4.6 Unfortunately, these procedures were not followed for the property record audits – a major design flaw and one of the root causes of the poor precision achieved. In any case, these non-standard property record audits cannot be treated exactly like the auditing textbook examples. However, it is clear from these

¹⁷ Arens and Loebbecke, **Applications of Statistical Sampling to Auditing**, Prentice Hall Inc., New Jersey, 1981, p. 75

¹⁸ Roberts, **Statistical Auditing**, American Institute of Certified Public Accountants, New York, NY, 1978 p. 40

¹⁹ Also, when assessing material amounts, both texts consider overstated AND understated amounts in the audit.

textbooks, Mr. Loebbecke's included, that a confidence bound, not the point estimate, should be used when considering the results of an audit.

4.7 To argue that the point estimates in this audit should be used no matter what, is equivalent to arguing that so long as you can find some formula in a book, you can allow any estimate to be used anytime, anywhere, no matter how imprecise or how severe the consequences. Such an argument is simply not statistically sound.

5 A One-Sided Lower Confidence Bound Should be Used.

5.1 There are several reasons why the lower bound should be used for assessing the amount of overstatement in the property records. First of all, only a material overstatement is being assessed. Dr. Bell and AT&T make it very clear that the property record audits never intended to even consider that the RBOCs may have understated any of the value of their hardwire equipment.

5.2 There were simply no data gathered to evaluate understated inventory. This was not a two-way audit; no attempt was made to look for items that were in service but missing from the property records. The auditors did not even increase the quantity shown when more items were found than the number reported in the CPR database.²⁰ This is one-sided decision-making means that there is interest in only one side of the confidence interval.

5.3 The lower bound should be used because when using statistical evidence to state with a level of confidence that the true value of the overstated inventory is at least a certain amount, the lower confidence bound is the largest value that can be used for that amount.

²⁰ The RBOC's reported to Ernst & Young that the FCC scored a record as "unverifiable" when a larger quantity was found than the quantity reported.

5.4 For example, in a statement like, “the overstated inventory is at least 2 million dollars,” the value of 2 million dollars must be the lower confidence bound in order to make the statement with a level of statistical confidence. It cannot be said statistically with any reasonable degree of confidence that the true value is at least the estimated amount, nor can it be said that the true value is at least the upper confidence bound. Every number inside the confidence interval is statistically the same. To make a correct statistical statement with a reasonable level of confidence it can only be said that the true amount is at least the lower confidence bound.

5.5 In addition, the FCC staff was in complete control of the sample design, and the onus was on them to assure appropriate precision. If the point estimate, or the upper confidence bound is used, there is no incentive to conduct an audit with an adequate enough sample. If the point estimate is used, then any estimate, no matter how imprecise (see 3.3 and 4.2) can be used. Clearly this is not appropriate. Nor is the upper bound appropriate, because this can be made arbitrarily large by implementing a poor sample design. The appropriate number for an audit such as the CPR audit is the lower confidence bound.

5.6 This is supported by the Committee on Applied and Theoretical Statistics on the Board on Mathematical Sciences, National Research Council.²¹ This is also consistent with practices by the Internal Revenue Service (IRS).²²

5.7 The lower bound is entirely appropriate because when the government conducts an audit, the taxpayers, like the RBOCs, have no control over the precision of the estimates. They have no say in the design specifications, sample size, or conduct of the audit.

²¹ Panel on Nonstandard Mixtures of Distributions, *Statistical Models in Analysis and Auditing*, Statistical Science, 1989, Vol. 4, No. 1, pp. 2-33. “Because the government may not wish to overestimate the adjustment that the auditee owes the government, interest often centers on the lower confidence limit of monetary error at a specified confidence level allowed by the policy.”

²² Internal Revenue Manual, 1982 42(18) 14.1